

CLASSIFICATION ~~S-E-C-R-E-T~~
SECURITY INFORMATION
CENTRAL INTELLIGENCE AGENCY

CD NO.

DATE OF

50X1-HUM[®]

50X1-HUM

SUPPLEMENT TO
REPORT NO.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF ESPIONAGE ACT 50 U. S. C. 31 AND 32.33 AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION
50X1-HUM

50X1-HUM

(When drawing comparisons between the statistical information from prewar and postwar Poland, one frequently makes erroneous judgments because of the territorial changes which took place immediately after the war (incorporation of former German regions, cession of Eastern Poland to the USSR, etc.). For this reason, this resume gives both the 1938 figures for what was originally prewar Poland (1938 A) and the 1938 figures for the territories within present day Poland's boundaries (1938 B). The 1955 figures are those of the revised Six-Year Plan.)

- 1 -

CONTROL/CE OFFICIALS ONLY

CLASSIFICATION **SECRET**

STATE		X	NAVY	X	RSPB	DISTRIBUTION			
ARMY		X	AIR	X	FB				

50X1-HUM

S-E-C-R-E-TKilometers

Standard gauge	1938 A	18,206
	1938 B	23,520
	1949	about 24,000
Narrow gauge	1938 A	2,100
	1938 B	2,500
	1949	about 4,000-5,000
Electrified	1938 A	about 5,850
	1938 A	109
	1949	

Quantity of Rolling StockUnits

Locomotives	1938 A	6,114
	1949	about 4,800
	1955	about 5,240
Passenger cars	1938 A	10,671
	1949	about 8,000-9,000
	1955	about 9,500
Freight cars	1938 A	159,934
	1949	about 160,000
	1955	about 193,600

Production of Rolling Stock

Locomotives	1938 A	28
	1949	267
	1955	315
Passenger cars	1938 A	12
	1949	200
	1955	630
Freight cars	1938 A	569
	1949	14,200
	1955	18,800

Volume of Transport

Passenger transport	1938 A	225,600,000 passengers
	1949	444,300,000 "
	1955	910,000,000 "
Freight transport	1938 A	7,512,000,000 passenger kilometers
	1949	20,978,000,000 "
	1955	75,000,000 tons
	1938 A	131,900,000 "
	1949	245,000,000 "
	1955	22,368,000,000 ton-kilometers
	1938 A	32,680,000,000 "
	1949	

- 2 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

INTRODUCTION

In connection with the postwar reconstruction of Poland, priority was given to all work benefiting the country's transportation system and to all investments connected with the repair and expansion of the railroad network. The national leaders also understood well that the prerequisite for the successful accomplishment of the great reconstruction program was that the railroad system be in serviceable condition. Only when this had been accomplished would the emphasis be shifted to investments in the other branches of transportation and in the other industries of the country.

The importance of the railroads to the entire Polish national economy may perhaps be shown most clearly by the fact that 94 percent of the domestic freight movement was by rail.

But the Polish railroads also had to play an important role in other connections. Before the war, their most important international function was to bear transit traffic between Germany on the one hand and East Prussia, the Baltic countries, and, to a rather small extent, the USSR on the other, a job of considerable magnitude which was performed creditably. There was no great volume of transit traffic in a north-south direction, however. The last few years before the war, however, did see a certain change in these conditions, as Poland, instead of shipping all its coal on the Oder River, shipped a large part of its coal export directly from Slask (Silesia) to Gdynia on the so-called "Coal Magistral" Line. This changed manner of transportation was profitable for the coal exporters, as the Polish railroads gave especially large rebates for shipments of this kind. Conditions changed completely after the war.

A look at the map of postwar Poland's railroads (Figure 1) immediately brings two points into view. One is the very dense railroad network in the western part of the country (with the hub in the south) compared to that in the more easterly regions. The other is the far greater number of north-south lines Poland has acquired through the incorporation of the western areas.

The concentration of railroads in the southwestern regions of the country (at this point it must be mentioned that Figure 1 shows only the main lines; a map showing all lines would emphasize even more the impression stated) has its natural explanation in the fact that this part of the country, which first and foremost must be designated Poland's industrial and raw-materials center, has an especially great need for freight and passenger transportation. The latter circumstance is perhaps more clearly brought out if a comparison is made between a Polish railroad map and a map indicating the population density. The two maps would show that the density is greatest toward the southwest and around Warsaw and Gdynia/Gdansk.

Acquisition of the Regained Territories, territories ceded to Poland from Germany after World War II, has been of great importance to the development of the railroad net of postwar Poland. As a matter of fact, the north-south lines of the Regained Territories have been the object of the most rapid reconstruction. The lines concerned have been assigned Polish transportation tasks, such as the shipment of export coal to Baltic Sea ports, transportation to and from the entire Silesian industrial area, and the forwarding of the rather great volume of transit traffic from Czechoslovakia and several of the other southeastern European countries to the Baltic Sea ports. The increased tension between the East and the West has contributed no little to this development, as it has meant that Szczecin would gradually assume the role Hamburg held as a transshipment port for southern and eastern Europe during the period between World Wars I and II. For example, the great imports of Swedish iron ore take place particularly by way of Szczecin. Inasmuch as shipping on the

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Oder River is still far from the 1938 level, the burdens imposed on the railroads have become all the greater. The most important north-south lines are: Szczecin-Kostrzyn-Zielona Gora-Wroclaw, Szczecin-Krzyz-Poznan-Ostrow/Wroclaw-Katowice, Gdansk-Tczew-Bydgoszcz-Zdunska Wola-Katowice (Coal Magistral Line), and Tczew-Malbork-Ilawa-Warsaw-Radom-Krakow. Several lines run south to the Czechoslovak border from Wroclaw, Katowice, and Krakow.

One of the driving forces behind the expansion of the north-south lines has been the Polish-Czechoslovak Communications Commission. This commission functions under the large commission set up in 1947 to effect economic cooperation between Poland and Czechoslovakia. Its work, among other things, has resulted in the establishment of the Czechoslovak free port in Szczecin.

The emphasis on the north-south axis has in no wise meant that the east-west connections have lost their importance. While the tasks of the former are primarily of an economic nature, the east-west lines are of far greater importance militarily, which fact is emphasized by the presence of Soviet railroad troops stationed along the most important east-west sectors and by the fact that a certain number of Soviet railroad officials have been transferred to the Polish State Railroads to serve in the stations along the east-west lines. By far the greatest portion of the supplies and of troop shipments to the Soviet occupation forces in East Germany passes over these lines. The most important lines are shown in Figure 2.

The strategic importance of the lines would not diminish if the Russians were to withdraw from East Germany, for they could quickly launch large forces of troops against the West from the large staging area immediately behind the Polish-USSR boundary, to the north and south of the Pripet Marsh, so long as they control the Polish railroads so important to them. Also to be remembered, in this connection, are the great transloading problems involved in the transfer of troops, material, and supplies from the USSR to Poland, and vice versa; due to the two different track gauges used in the two countries. The most important transloading stations are: Graniewo, Gierdawy, Kuznica, Brzesc, Dorohusk, and Przemysl. The Russian-gauged line has been extended west from Brzesc to Terespol, where a new transloading station is reported to be under construction. However, transloading is still taking place at Brzesc.

Even if the traffic in an east-west direction, as reported by German sources, amounts only to 20 percent of the prewar volume, the lines have by no means lost their economic importance. A large part of the commercial traffic between Poland and the USSR and between Czechoslovakia and the USSR passes over these; the same holds true to a lesser extent for the traffic between East Germany and the USSR, for the major portion of the commercial traffic, including the shipment of reparations to the USSR, goes by way of the German Baltic ports and Szczecin directly to the USSR.

I. DEVELOPMENT OF RAILROADS

A. Before World War II

During the period between World Wars I and II, the Polish railroads developed from sheer chaos in 1919 - 1920 to a high level, from the international viewpoint, in the late 1930s. This may be attributed primarily to a rigid adherence to schedules, effective utilization of equipment, great concern over safety measures, and a high level of cleanliness.

- 4 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Before World War II, the rolling stock consisted of 6,114 locomotives, 10,671 passenger cars, and 159,937 freight cars. The network had a total length of 18,206 kilometers of standard-gauge track, besides about 2,100 kilometers of narrow-gauge track. The present area of Poland had 26,020 kilometers of track in 1938, including 2,500 kilometers of narrow-gauge track.

The total volume of transport in 1938 was 225,600,000 passengers and 75 million tons of freight.

The greater part of the Polish railroads was owned by the state. Only a part of the local lines were owned privately; among others, foreign interests had investments in these.

B. During World War II

The German occupation of Poland in September 1939 brought about far-reaching changes in the railroad system both technically and administratively. Central Poland became the so-called "General Gouvernement" after the western territory was incorporated into Germany and the eastern territory, West Ukraine, into the USSR.

Table 1. The Railroad System of Occupied Poland
(as of 31 August 1939)

	<u>Line Length</u>		<u>Per 1,000 Inhabitants</u>
	<u>Total (km)</u>	<u>%</u>	
Poland, including West Ukraine	20,326	100	5.2
Poland, excluding West Ukraine	12,517	61.6	5.6
Divided into:			
Areas incorporated into			
Germany	8,103	39.9	7.7
General Gouvernement	4,380	21.5	3.8
Slovakia	34	0.2	11.3

Source: Transport and Communication Review, Jan - Mar 1949.

A special law of 9 September 1939 created a specially administered railroad system called the East Line (Ostbahn) in the General Gouvernement. The railroad net of western Poland was incorporated into the German Reichsbahn under a law of 27 December 1939 issued by the German Ministry of Transportation.

Part of the rolling stock was turned over to the Reichsbahn and part to the Russian-occupied areas. The General Gouvernement received mostly old equipment scraped together from the other German-occupied countries.

Only those lines of primary importance to the occupying power were kept up.

According to an official Polish account, the total loss and destruction suffered by the communications and transportation system during World War II amounted to 10,591,000,000 zlotys (at the official rate of exchange in 1948, about 105 million dollars).

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

The loss of rolling stock included 2,465 locomotives, 6,256 passenger cars, and 83,636 freight cars. Almost 6,000 kilometers of track and nearly 48 kilometers of railroad bridges and viaducts were destroyed or dismantled. (Another source reports the destruction at about 70 kilometers of railroad bridges and half of the trackage, that is, 9,000 kilometers of track.)

In the Regained Territories, the destruction was greater in the communications system than in industry. With the exception of southern Slask, 70 percent of the railroads and 55 percent of the bridges were blown up. For example, a total of 52 bridges over the Oder River between Kozle and Szczecin were destroyed, greatly hindering rail, highway, and river traffic.

In Slask alone, a total of 249 bridges, viaducts, and tunnels were destroyed.

Most of the rolling stock in these areas was removed by the retreating German troops, the rest being left behind because it was in such poor condition that the Germans did not find it worth while to take with them.

On the other hand, the damage to the railroad workshops and plant buildings amounted to only 10-20 percent. But to make up for it, 85-95 percent of the inventories and machines were so thoroughly wrecked that their repair was impossible.

C. After World War II

The Polish railroads began to function a little, even in July 1944, as the Germans retreated; but only in August 1945 did the administration control the whole railroad system, after which a special commission for the reconstruction of communications and transportation was set up. Investments in the transportation system received top priority, as the reconstruction of the entire economic system was dependent on the shipment of goods.

In consequence of the great destruction and shortages of rolling stock, the transportation system threatened to become the bottleneck in the reconstruction program. The reestablishment of lines of communication between the industrial area in Slask and the Baltic Sea ports played an especially great role in the development of coal export. Moreover, the great migration and evacuation of population in connection with the border changes made necessary an effective use of passenger transportation.

Another important element in the reconstruction was the incorporation of the Regained Territories in the west and northeast. The incorporation of the railroad net of these areas into the Polish system in 1945 was to have increased the length of the prewar net by 33 percent, namely 11,218 kilometers of standard-gauge track and 2,773 kilometers of narrow-gauge track; however, as a result of Russian dismantling in these areas, the increase was considerably less. This dismantling, which took place only in the former German areas, was regarded as war booty. In Olsztyn Wojewodztwo along, 1,500 kilometers of track, especially branch lines, of the total of 2,500 kilometers, were dismantled. A second technique applied was the dismantling of one track of a double-tracked line. The railroad network was very dense in these areas compared to the rest of Poland (11 kilometers of track per 10,000 inhabitants, compared to 5.8 kilometers in Poland as a whole), and it was highly exploited, as 93 million tons were transported there in 1938 compared to Poland's 75 million tons during the same period.

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

As previously mentioned, the destruction in the Regained Territories involved 70 percent of the trackage, and the reconstruction of this was made much more difficult because the Germans had removed everything which could be of value in the reconstruction work.

A 1946 decree provided for the nationalization of the railroads of the Regained Territories with the exception of a few small, local lines.

D. Reconstruction and Expansion

The reconstruction and expansion of the Polish railroads is to take place in accordance with a special plan prepared by the Ministry of Communications. This plan divides the development into three phases:

The first phase, covering the years 1945 and 1946, was dedicated to the construction of only 85 kilometers of new lines and the reconstruction of 4,500 kilometers of destroyed lines.

In the second phase, extending over the following 3 years, 395 kilometers of new lines were to be built and the reconstruction of destroyed lines was to continue.

In the third phase, extending over 5 years, 953 kilometers of new lines are to be laid.

In connection with the reconstruction, it was further intended that the railroad system be coordinated with the systems in Czechoslovakia and the other Danube countries.

1. First Phase, 1945 - 1946

At the time Poland took over the railroads, the rolling stock was in exceedingly poor condition -- windows were smashed and doors were missing, parts supplies were destroyed, the rolling stock was affected by severe wear and tear, etc. -- and it was necessary for Poland to make heavy investments of money and materials to bring the railroads into condition again.

Table 2. Quantity of Rolling Stock

	<u>1939</u>	<u>1945</u>		<u>1946</u>	
		<u>Serviceable</u>	<u>Under Repair</u>	<u>Serviceable</u>	<u>Under Repair</u>
Locomotives	6,114	5,114	2,864	2,640	2,570
Passenger cars	10,671	8,000	4,800	--	--
Freight cars	159,937	111,000	18,500	111,000	47,336

Source: Transport and Communication Review, Jan - Mar 1949.

As is shown by the above table, a large part of the rolling stock from 1939 was unserviceable after the war. The rolling stock undergoing repair constituted a considerable portion of the total park. Under normal conditions, only 4 percent of the stock is under repair or undergoing overhaul. This condition, needless to say, posed heavy demands on the repair

- 7 -

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

shops of which only three out of 23 could be used. Of the others, four were burnt to the ground, eight were completely plundered of machinery and tools, and in eight others over 60 percent of the equipment had been removed. In order to repair this damage as rapidly as possible, the government pushed the restoration of the repair shops. One of the largest was Pa-Fa-Wag (Panstowa Fabryka Wagonow, State Railroad Car Factory) in Wroclaw. Even in 1945 this repair shop began to operate, although practically without equipment. However, right from the start it began to turn out 12 freight cars a month.

Other reconstruction progressed rapidly. This was particularly true of bridges and railroad lines. According to the plan, 4,500 kilometers of destroyed lines were to be rebuilt and 85 kilometers of lines built anew in 1945 and 1946.

In 1945, there were 17,263 kilometers of usable standard-gauge track; in 1946, this figure reached 20,580 kilometers.

Table 3. Reconstruction of Lines and Bridges

<u>Reconstructed</u>	<u>1945</u>	<u>1946</u>
Lines (km)	3,480	2,143
Bridges (km)		
Permanent	1.150	9.300
Temporary	44.400	6.700

Source: Poland's Statistical Yearbook, 1948.

As may be seen, the plan for the reconstruction of 4,500 kilometers was exceeded by barely 20 percent [sic; actually 25 percent], but it certainly must be assumed that part of the trackage, like the restored bridges, was rebuilt more or less provisionally.

Concerning the volume of transport on the Polish railroad net, no figures are available for 1945, as the chaotic conditions also characterized the checking and the statistics. For 1946, however, the following figures are available:

Table 4. Volume of Railroad Transport in 1946

	<u>1938</u>	<u>1946</u>
Freight (million tons)	75	67
Volume (million ton-kilometers)	22,368	19,366
Millions of passengers	225.6	244.9
Volume (million passenger-kilometers)	7,512	15,620

Sources: Wiadomosci Statystyczne 1949 and Poland's Statistical Yearbook 1948.

- 8 -

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

From the above table it is clear that Poland has made a colossal effort, if the condition of the equipment and rolling stock is taken into consideration. The high figures for passenger transportation must be viewed against the background of the population movements within the country's boundaries. While the average traveling distance in 1938 was 33 kilometers, in 1946 it was 64 kilometers, which must be explained by the population movements over rather great distances. The volume of freight traffic in 1946 compared to that in 1938 more or less correspond to the relationship between the numbers of freight cars in service during those years.

2. Second Phase, 1947 - 1949 -- The Three-Year Plan

With the institution of the Three-Year Plan, certain definite goals, to be attained in the course of the 3-year period, were fixed for all spheres of activity in rail transportation. An investment plan also was prepared with a view to reconstruction. The following table provides the 1947 and 1948 investment figures for the railroads:

Table 5. Investments in the Railroad System
(millions of zlotys)

	<u>1947</u>	<u>1948</u>
Fixed installations, including track	6,500	20,200
Regained Territories	--	7,100
Rolling stock	3,200	8,300
Buildings and technical facilities	--	4,100

Source: Transport and Communication Review, Jan - Mar 1949.

The following pages will show, to the extent it has been possible to obtain data, the various plans and the extent to which they have been executed during the individual years. Table 6 gives data for rolling stock.

Table 6. Production of Rolling Stock

	<u>1938</u> (actual)	<u>1946</u> (actual)	<u>1947</u> (planned)	<u>1947</u> (actual)
Locomotives	28	178	200	254
Passenger cars (standard gauge)	12	--	--	108
Freight cars	559	5,221	12,000	11,500

- 9 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

	1948		1949	
	(planned)	(actual)	(planned)	(actual)
Locomotives	270	265	300	267
Passenger cars (standard gauge)	--	232	--	200
Freight cars	15,000	15,000	16,600	14,200

Sources: International Reference Service, May 1948. Poland's Recovery.
 Wiadomosci Statystyczne 1949. UN Statistical Yearbook 1948.
 ECE Industrial and Material Committee, Report of 25 February 1950

It will be seen from the table that the production of locomotives for the 3 years covered by the plan was up to expectations, while the production of freight cars was carried out to only 93 percent of the plan goal. In regard to the production of passenger cars, it has not been possible to learn whether any such production had been planned for the 3-year period. The low number could indicate that it had not. Also the reconstruction of the railroad lines and bridges progressed according to the Three-Year Plan. Table 7 shows the development.

Table 7. Reconstruction of Lines and Bridges

<u>Repaired</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>
Track (km)	530	1,000	1,000
Bridges (km)			
Permanent	12.6	--	--
Temporary	1.8	--	--
Total bridges (km)	14.4	22	23

Sources: Statistical Yearbook of Poland 1948; Det nya Polen [Swedish], No 3/50.

Starting with the combined length of the standard lines in 1947, 20,949 kilometers, it follows that the railroads at the end of 1949 were to have a total length of nearly 24,000 kilometers, compared with 26,500 kilometers in 1938 within the present boundaries of Poland and 18,200 kilometers in prewar Poland. Thus, so far as trackage is concerned, the reconstruction is practically complete. This includes the new trackage of 395 kilometers provided under the Three-Year Plan.

The new constructions include among others, the Slask-Szczecin line, which is to handle part of the important coal transportation, and the expansion of the net in Szczecin itself, where, among other things, a new freight yard has been built at the harbor. Further, the Three-Year Plan provided for the electrification of the network around Warsaw and in Upper Slask.

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

The volume of transport under the Three-Year Plan displayed a very fluctuating course, as follows:

Table 8. Volume of Transport on the Railroads

	<u>1938</u> (actual)	<u>1946</u> (actual)	<u>1947</u> (planned, (actual)	
Freight transport (million tons)	75	65	84	88.2
Freight transport (million ton- kilometers)	22,368	19,368	29,064	21,252
Passenger transport (million passengers)	225.6	244.9	216.9	331.2
Passenger transport (million passenger- kilometers)	7,512	15,620	13,000	17,964
Average transport distance (kilo- meters per ton of freight)	290	289	346	241
Average traveling distance (kilo- meters per passenger)	33	64	58	54
		<u>1948</u> (planned)	(actual)	<u>1949</u> (planned) (actual)
Freight transport (million tons)		100	114.4	120 131.9
Freight transport (million ton- kilometers)		35,532	28,380	36,000 32,680
Passenger transport (million passengers)		230.7	387.6	240 444.3
Passenger transport (million passenger- kilometers)		12,000	20,292	11,200 20,978
Average transport distance (kilometers per ton of freight)		355	248	300 255
Average traveling distance (kilometers per passenger)		52	51	45 48

Sources: Wiadomosci Statystyczne 1949. Rehabilitation of Polish Economy, Transport and Communication Review, Jan - Mar 1949. Wirtschafts-
dienst, Aug 1949.

- 11 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

According to the table, freight transport since the war has steadily risen, both in tons and in ton-kilometers. If the volume of freight transported in 1938 (75 million tons) equals 100, the following index figures are obtained: 1946, 89; 1947, 118; 1948, 153; and 1949, 176. In ton-kilometers, still using 1938 as the base year, the figures are: 1946, 87; 1947, 95; 1948, 127; and 1949, 146. In regard to the fulfillment of the plan, it is seen that the plan figures were exceeded for all 3 years for the absolute transport in tons, while the opposite is the case for transportation expressed in ton-kilometers. Study of the average transport distance per ton of freight shows that on an average the shipments went over a shorter distance than envisaged in the plan. This is not to be blamed entirely on the plan's not having been followed, because the planned shortening of the lines, resulting from the rerouting of certain lines under the reconstruction program, also entered as a factor. The lines were shortened in order to effect savings in the consumption of coal and fuel oil; this, too, was achieved. At the same time, operation was streamlined, so that the consumption of coal, which in 1947 amounted to 92.6 kilograms per 1,000 ton-kilometers, was cut down to 69.8 kilograms in 1948 and to 59 kilograms in 1949, that is, a reduction of over one third in the course of 2 years.

Passenger transportation shows even greater absolute increases; however, it appears that in 1949 there was a leveling off in the volume of transport expressed in passenger-kilometers. Taking 1938 as a base year, the number of passengers transported was 108 in 1946, 147 in 1947, 172 in 1948, and 197 in 1949. For the volume of transport expressed in passenger-kilometers, the corresponding figures are 208 in 1946, 239 in 1947, 270 in 1948, and 279 in 1949. The plans were exceeded in all 3 years both in regard to the number of passengers transported and in the volume of transport expressed in passenger-kilometers. The changes in the average distance traveled per passenger are probably closely tied to the great population movements during the years right after the war. In general, it may be stated that the persons who prepared the plans in defiance of shortages of equipment and during chaotic conditions must have had a thorough knowledge of their field of work, provided that the figures given are correct, which is doubtful. However, no information is available from other sources on these conditions.

3. Third Phase (See Part IV below)

II. PRESENT STATUS

A. Rail Network

Poland's railroad network as of 1950 is shown in Figure 1.

For the sake of clarity, the lines of local interest, particularly the narrow-gauge lines, have not been entered on the map. Figure 1 gives both the single-track and the double-track stretches. The method of procedure followed in the preparation of the map is described in "Notes on Figures," below.

Figure 2 shows the most important east-west transit lines, and, finally, Figure 3 shows the frequency per day in 1949 of passenger trains on the most important stretches.

It is characteristic of the Polish rail network that the greatest concentration occurs in the former German areas, while the more sparsely settled areas in the east have relatively few railroad lines. As mentioned earlier, dismantling took place in those areas received by Poland after the war, as

- 12 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

the Russians regarded the railroads as war booty. As a rule, the main stretches were retained, although at some places one track of a double-track line was removed. Mainly the local lines were dismantled. Within the boundaries of pre-war Poland there was little dismantling, and that was carried out by the Poles themselves. Since 1947, there has been no dismantling of any kind.

Regarding the orientation and density of the railroad network, it is officially stated by the Poles that "the especially favorable layout of the lines forms a splendidly developed communications system, excellently adapted to the economic requirements.

"Special mention is to be given to (1) the great advantages stemming from the utilization of the railroad network of the Regained Territories, which constitutes an excellent supplement for the transportation and communications requirement of the economic center of Slask (Silesia) toward the sea, (2) the very straight course of the Slask-Wisla River mouth line, (3) the advantageous connection with the capital, Warsaw, and (4) the high degree of development of the Poznan junction."

Moreover, the orientation of the line network in a north-south direction is of importance to transit traffic. In contrast to the predominantly east-west layout before the war, the north-south traffic has assumed growing importance for transit traffic from Czechoslovakia and the southeastern European countries since the exclusion of Hamburg as an export port. In the last several years, however, the traffic in an east-west direction has increased in consequence of the trade between the USSR and the Satellites. Furthermore, Soviet shipments of troops and material to East Germany have taken place since the end of the war. Finally, strategic considerations are of importance to the east-west railroads. Especially if the Russians were to withdraw their troops from East Germany and desired to maintain fast lines of communication to East Germany from East Prussia and the Ukraine. It should also be mentioned in this connection that the construction of the bridge across the Oder River east of Glogow on the Glogow-Krotoszyn sector (see Figure 2) will open still another fast connection from Lodz via Ostrow to Forst.

1. Length of the Rail Network

The Polish railroad network has developed as follows before and after the war:

Table 9. Length of the Polish Rail Network (kilometers)

	<u>1938</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Standard gauge *	18,206	--	--	--
Standard gauge**	23,520	17,263	20,580	20,949
Narrow gauge *	2,100	--	--	--
Narrow gauge**	2,500	3,012	3,280	3,589
Broad gauge *	--	--	530	466
Reconstructed during the course of the year		3,430	2,143	539
Under reconstruction				
Standard gauge		--	--	2,984
Narrow gauge		4,305	4,305	4,270

* In pre-war Poland

** Within the area of postwar Poland

Source: Poland's Statistical Yearbook, 1948; International Reference Service, May 1948; International Railway Statistics, 1946.

- 13 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Thus, from 1945 to 1947, the combined standard and narrow-gauge trackage increased by 20 percent. The tendency in the reconstruction of the Polish railroad network appears to have been first to reconstruct the standard-gauge lines and then gradually to step up the reconstruction of the narrow-gauge lines as the standard-gauge lines became completed. This is certainly the explanation for the fact that no change took place in the figures for the length of the narrow-gauge lines during the reconstruction from 1945 to 1946, since no stretches were completed.

The 466 kilometers of wide-gauge trackage in 1947 included the lines from the southern part of the boundary with the USSR to the industrial area around Sosnowice in Upper Silesia. It was officially reported on 5 November 1947 that these lines had been converted to standard gauge.

While all the standard-gauge lines are under state administration, about one third of the narrow-gauge lines are under local or private management.

For the years 1948 and 1949 there is no information on the length of the railroad network except for a report that by early 1950 about 12,000 kilometers of trackage had been reconstructed. This tallies closely with the figures given in Table 9 (in 1947 6,162 kilometers had been reconstructed and 7,254 kilometers were under reconstruction) when one considers it along with the report that not all the lines had yet been reconstructed. If one adds 12,000 to the figure for the length of the railroads existing in 1945, one finds that the standard-gauge trackage today is 24,000 kilometers and the narrow-gauge trackage is 4,000-5,000 kilometers.

2. Bridges

The reconstruction of the railroad bridges took place side by side with the reconstruction of the railroad network itself, although a considerable number of these bridges, especially in the initial years, were restored only provisionally.

Some of the bridges are for double track, but how many is not known, as double-track bridges have not been built along all double-track stretches. It is also not known how many bridges there are for narrow-gauge railroads alone. The reconstruction of bridges has developed as follows:

Table 10. Length of Reconstructed Bridges (meters)

	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>
Permanent bridges	1,150	9,300	12,600	--	--
Temporary bridges	44,400	6,700	1,800	--	--
Total	45,550	16,000	14,400	22,000	23,000

Sources: Poland's Statistical Yearbook, 1948; Det nya Polen, No 3, 1950.

3. Electrification

Electrification of the rail network is taking place only in the areas around cities, in the most highly populated industrial centers, and along individual main stretches. This is borne out by the following table:

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

Table 11. Electrification of the Rail Network (kilometers)

	<u>1937</u>	<u>1938</u>	<u>1946</u>	<u>1947</u>
Electrified lines	85	109	23	28
Electrified local traffic	--	--	230.9	312.5
Including:				
Warsaw district			--	40.2
Lodz district (narrow gauge)			--	80.9
Glask-Dabrowa basin			--	168.9
Bielsk district			--	4.9
Jelenia Gora district			--	17.6

Source: Poland's Statistical Yearbook, 1948.

According to Det nya Polen, No 3, 1950, the stretches Warsaw-Zyradow (about 45 kilometers), Warsaw-Otwock (25 kilometers), and Warsaw-Minsk Mazowiecki (40 kilometers) have also been electrified, so that the Warsaw district has at least 150 kilometers of electrified lines. The supervision of this work has been in the hands of the Swedish firm ASEA.

4. Condition of Permanent Way.

At most places the permanent way is poorly maintained; only on the strategic east-west lines has an attempt been made to maintain the permanent way in good condition by, among other things, replacing the rails. But the results of this have not coincided with the plans, as it has turned out that rails have been in short supply.

So far as is known, in 1948 and 1949 there was supposed to have been an accounting on the number of rails laid. It has been figured that for the first year damage to the rails amounted to a total of 600-800 million zlotys. For 1949, the amount has been at least the same, perhaps larger.

The safety service, whose task it is to direct traffic on the Polish railroads, appears to have detected a number of irregularities in the rails. These irregularities are blamed on structural defects in the manufacture due to negligence and perhaps due to direct sabotage.

When rails break or other damage occurs so frequently, as is the case there, it may undoubtedly be attributed, besides the above reasons, to the fact that obsolete equipment (locomotives, cars, etc.) in poor condition cause abnormally heavy wear on the rails.

B. Rolling Stock

The rolling stock of the Polish railroads is old and in poor condition. Only the main lines have modern Polish passenger locomotives and new, well-equipped passenger cars. Many local trains, even so recently as late 1948, have used passenger cars converted from cattle cars and freight cars. On the whole, the car park must be replaced, but inasmuch as part of the domestic production of rolling stock goes to the USSR, it will take a longer time to accomplish this than the production figures indicate.

- 15 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Table 12. Stock of Locomotives and Rail Motorcars

	<u>1937</u>	<u>1938</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Standard-gauge locomotives	5,583	5,176	2,864	5,465*	6,874*
Narrow-gauge locomotives		--	469	528	495
Broad-gauge locomotives	--	--	--	246	--
Standard-gauge rail motorcars	68	--	--	--	22
Narrow-gauge rail motorcars	--	--	66	73	56
Electric rail motorcars (local)	--	--	--	256	294 (52 narrow gauge)
Electric rail motorcars (long distance)	66	76	--	8	16

* Nearly half of these are unserviceable.

Sources: Poland's Statistical Yearbook, 1948; International Reference Service, May 1948; International Railway Statistics, 1946; Transport and Communication Review, Jan - Mar 1949.

As is shown by the table, the number of locomotives apparently exceeded the prewar level, but, as is indicated, the figures for 1946 and 1947 cover both serviceable and unserviceable locomotives. The locomotive park in 1949 was calculated to be 4,800, or a little more than 90 percent of the prewar figure, and these had to serve 33 percent larger network.

Beyond this, there is no information on the locomotive park, but on the basis of knowledge of both the volume of transport in 1948 and 1949 and of the total production and import of locomotives in those 2 years -- a total of at least 500, some of which presumably were delivered to the USSR -- it must be assumed that the goal set has not been reached.

Neither can the number of narrow-gauge locomotives be appreciably higher today than in 1947; the annual production of these varies between 60 and 70 locomotives. So far as the rail motorcars are concerned, the number of electric rail motorcars has probably increased considerably in view of the expansion of the electrified line network.

Table 13. Rolling Stock of Passenger Cars

	<u>1937</u>	<u>1938</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Standard-gauge passenger cars	10,802	10,534	4,800	7,017	7,796
Narrow-gauge passenger cars			662	756	769
For electrified local traffic	--	--	--	243	343
For electrified long-distance traffic	132	152	--	16	22

Sources: UN Statistical Yearbook, 1948; Poland's Statistical Yearbook, 1948; International Railway Statistics, 1946.

- 16 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

According to the International Reference Service, May 1948, the number of passenger cars at the end of 1949 was to be 9,000. On the basis of the volumes of transport in 1948 and 1949 and the production of passenger cars in those years, it must be assumed that this figure was not attained. The reason for the trebling of passenger transportation, measured in passenger-kilometers, compared to that in 1938, despite the fact that the passenger-car park was only about 80 percent of the prewar figure, must be sought in a better utilization of capacity.

Table 14. Rolling Stock of Freight Cars

	<u>1938</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Standard-gauge freight cars	152,662	18,500	138,326	144,453
Narrow-gauge freight cars	--	13,005	13,420	13,646
Broad-gauge freight cars	--	--	6,346	--
For electrified local traffic	--	--	83	84*

* Including 70 narrow-gauge cars

Sources: UN Statistical Yearbook, 1948; International Railway Statistics, 1946; Poland's Statistical Yearbook, 1948; Transport and Communication Review, Jan - Mar 1949.

Of the figure of 138,326 freight cars in 1946, the International Reference Service reports that only half were in use, while the Transport and Communication Review states that 110,000 were in use. The 138,326 cars were divided into 40,532 box cars, 85,662 open cars, and 12,132 special cars. The corresponding breakdown for the 13,420 narrow-gauge freight cars was 1,280 box cars and the rest open cars.

The numerical goal for freight cars at the end of 1949 was 160,000. The volume of transport in ton-kilometers in 1949 exceeded that of 1938 by 46 percent. Even with increased utilization of capacity, this could have been achieved only if the above goal had been attained. The production under the Three-Year Plan amounted to about 40,000 freight cars. This figure seems to confirm the truth of a freight-car park of 160,000 today.

C. Volume of Transport

As is shown in Table 8, the volume of transport has risen sharply after World War II. This development is especially noteworthy when it is borne in mind that the equipment is only 75-80 percent of the prewar inventory and that the length of the trackage has increased 33 percent in relation to that of 1938. It cannot be denied that Poland has made quite an achievement in this field. In spite of the favorable development, however, certain difficulties have manifested themselves which it has not been possible to overcome.

These difficulties arise right after fall, when the agricultural products are to be shipped in. In 1949, the quantity involved was 600,000 tons, which had to be shipped in a period of time. To effect this shipment, 30,000 extra cars are required. Having been used once, these cars must be placed in reserve for the following year. An attempt has been made to solve the problem by planning transportation for the whole year in such a way that there is a leveling out of the volume of transport for all 12 months. This attempt failed in 1949, and the problem is still unsolved. In spite of an increase in the transportation of freight of about 15 percent from 1948 to 1949 as compared to only

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

seven percent in the freight-car park, transportation as a whole functioned, thanks to increased speed, better utilization of capacity, and a shortening of the lines.

As previously mentioned, Figure 3 shows the frequency of passenger trains per day on the most important stretches. In general, the frequency of freight traffic is approximately the same as that of the passenger traffic, but certain lines are used for freight transport to a greater extent. A good example of this is the Coal Magistral Line, Katowice-Bytom-Adunsk Wola-Bydgoszcz-Gdansk, which is traveled by fewer than ten passenger trains a day, but which on the other hand is used to a very great extent for coal transport from Silesia to the Baltic Sea and ore transport in the opposite direction.

Table 15. Volume of Transport on the Narrow-Gauge Lines

	<u>1945</u>	<u>1946</u>	<u>1947</u>
Passengers (millions)	12.0	19.1	20.8
Volume (million passenger-kilometers)	221	351	357
Freight (million tons)	4.2	7.2	6.7
Volume (million ton-kilometers)	81.6	128.6	109.9

Source: Poland's Statistical Yearbook, 1948.

There is no information after 1947 on the narrow-gauge lines; there development was on the verge of stagnating in that year. Passenger transportation rose insignificantly from 1946 to 1947, and freight traffic dropped. On the basis of the above figures, however, the conclusion may not be drawn that these railroads are declining in importance, as the standstill in 1947 definitely can be attributed to the shortage of equipment (in the first few postwar years, the primary emphasis of reconstruction was placed on the standard-gauge lines); the shortage of equipment can gradually be overcome by the manufacture of new cars and by repair of the old ones.

The volume of transport on the broad-gauge lines was 2.9 million ton-kilometers in 1947.

In 1947, 165.9 million passengers and 49,400 tons of freight were transported by electrified local traffic, as compared with 134.5 million passengers and 22,500 tons of freight in 1946.

Before World War II, transit traffic was an important Polish railroad activity, primarily attributable to German trade with East Prussia and the Baltic Sea.

It became clear after World War II that the transit traffic would disappear, as there was no east-west traffic except that of the Soviet occupation forces. However, as it proved difficult for Hungary and especially Czechoslovakia to utilize the prewar connections with the West via the German railroad and river network to Hamburg, these countries decided to make use of the Baltic Sea ports instead, and a new orientation of the transit traffic through Poland was the result.

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

As is shown by the following table, transit traffic has still not reached the prewar level, but with the planned development of Polish-Czechoslovak economic cooperation, it presumably will assume proportions greater than before World War II, provided that Poland's railroad system will be in a position to carry it out.

Table 16. Transit Traffic via the Polish Railroads

	1937	1938	1946	1947	1948	1 Jan - 30 Sep 1949
Total (1,000 tons)	6,127	5,901	890	1,247	1,383	1,179
Including:						
Ore	850	--	313	1,137	1,211	--
Iron and steel products	158	--	158	23	139	--
Iron and steel	272	--	15	13	*	--
Timber	598	--	13	2	58	--
Machinery	*	*	369	1	*	--
Sugar	2	--	13	- x)	*	--

* The figure was zero or insignificant.

Sources: Statistical Yearbook of Poland, 1948; Wiadomosci Statystyczne, 1949.

The most important commodities being transited through Poland are ore, which is being imported into Czechoslovakia, and timber and iron and steel products, which are being exported from that country. It must also be noted that there is also considerable transit traffic by way of the Oder River, and inasmuch as this transportation route is to be expanded greatly, there is question as to the extent to which Czechoslovakia in the future will avail herself of the more costly railroad transportation.

Examination of traveling times given in the official timetables indicates that apparently three types of trains are used:

1. Ordinary trains ("milk" trains), with a speed of 30-35 kilometers per hour between main stations
2. Passenger trains, with a speed of 40-45 kilometers per hour between main stations
3. Express trains, with a speed of 60-65 kilometers per hour between main stations.

D. Stations

The railroad stations are modernly equipped with electrically operated switches and other safety equipment which can promote the rapid dispatch of traffic. In view of the steadily increasing volume of transport, new, large

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

marshalling yards are to be set up at Siedlce, Terespol, and 15 kilometers west of Warsaw, and at other places. The marshalling yard at Terespol is, as previously mentioned, to be connected to Brzesc by means of a broad-gauge line in order that the transshipment yard at the latter may be relieved by the new transshipment yard at Terespol.

For the most part, the stations appear to be adequately equipped.

E. Supply of Equipment

1. Domestic Production

Poland's prewar production of rolling stock, as shown by the following table, was minimal. So far as passenger cars are concerned, this is still the case, even though this type of production has been increasing.

On the other hand, there has been a great upswing in the production of freight cars and locomotives. This will not be shown in full in Table 17 because, as will be brought out later in the discussion of the individual factories, a large part of the production goes to the USSR and the Satellites, and is not entered in the official Polish statistics.

Table 17. Production of Rolling Stock

	<u>1937</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>	<u>1949</u>
Locomotives	32	75	178	254	265	267
Passenger cars				108	232	200
Freight cars	295	80	5,221	11,458	15,000	14,200

Sources: UN Statistical Yearbook 1948; Wiadomosci Statystyczne 1949;
ECE Industrial and Material Committee: Report 25 February 1950.

In the above table the figures for the rolling stock include the stock for standard as well as narrow-gauge tracks. Up to 1948 the figures include broad-gauge stock also.

The production of stock for narrow-gauge tracks only is as follows:

Table 18. Production of Narrow-Gauge Rolling Stock

	<u>1947</u>	<u>1948</u>	<u>1 Jan - 30 Sep</u> <u>1949</u>
Locomotives	50	42	55
Freight cars	490	547	88

Source: Wiadomosci Statystyczne 1949.

The table corresponds very closely to the figures for the reconstruction of the railway network itself, in that the narrow-gauge lines received attention quite late.

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

The figure for the first nine months of 1949 indicates that there have been irregularities in one form or another. As far as the above figure is concerned, it must, however, be remembered that a large number of these narrow-gauge cars go to the Soviet Union.

Concerning the largest manufacturers of rolling stock and other railway equipment, the following information can be given:

a. Pa-Fa-Wag in Wroclaw

This state-owned factory, the largest of its kind in Poland, employs 12,000 laborers. Production includes principally freight cars for coal transport, most of which are sent to the USSR and the rest to the Eastern European states. Passenger cars and special freight cars, including various types of tank cars, are also produced.

The factory was already in operation in 1945 despite great destruction and lack of machines. In 1946 the production exceeded 300 freight cars per month. At the end of 1947 this figure rose to 600 and in 1949 to 700. According to official sources, the production at the beginning of 1950 was to amount to 40 freight cars per day. Since World War II, the factory has produced over 25,000 freight cars in all.

b. Fabryka Parowozow (Locomotive Plant) H. Cegielski S. A. in Poznan

This factory, which has been nationalized and recently renamed the Stalin Workshops, officially produces locomotives. Locomotives are produced to a small extent here, but the principal production is cannons.

The factory employs 10,000 workers and owns several installations around Poznan. The largest of these is in Dommeru Wilda, a suburb.

The manufacture of locomotives, which are exclusively for the Soviet Union, consists of a large heavy Russian type for use over long distances. Additionally, special tank cars are produced, presumably for transporting hydrogen peroxide. The production of these cars, which amounts to only about 20 units per year, is exclusively for the Soviet Union.

Since the restoration of the factory, almost 6,000 locomotives and cars have been repaired.

c. Pierwsza Fabryka Lokomotyw w Polsce S. A. (First Locomotive Plant in Poland) in Chrzanow West of Krakow

Production at this plant includes locomotives for tracks of all three gauges. Over half the production, principally the smaller types for narrow-gauge tracks, are exported to the USSR.

The plant also manufactures spare parts for locomotives. About 7,000 workers are employed at the plant.

According to unofficial sources, in 1949 not less than 130 locomotives were produced at this plant (the official Polish production in the same year was 267 units). Fifty-five units of the express train type PT 47 (maximum speed 110 kilometers per hour) have been produced from the time the factory resumed operations after World War II until the middle of 1949.

d. Wytownia Parowozow Zaklady Ostrowieckie (Ostrowiec Locomotive Construction Works) in Warsaw

In 1949 this plant employed 3,500 workers. According to the Six-Year Plan, this figure is to be increased to 8,000.

- 21 -

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

Production includes the manufacture of standard-gauge locomotives for Poland and for export to the West.

Locomotive boilers are also produced. Almost all of this production goes to the USSR.

- e. Polskie Zakłady Babcock -- Zieleniewski A. S. (Babcock-Zieleniewski, Polish Works) in Sosnowice

Besides locomotive boilers, the plant produces railway switches and railway yard equipment to cover the needs of the country. However, offers of boilers are made to the West. The plant employs 3,000 workers.

- f. Wytownia Sygnałow i Urządzenie Kolejowych (Signal and Railway Equipment Construction) in Krakow

This plant, which produces signal and lighting apparatus for railways, is the only one of its kind in Poland. Up to 80 percent of its production stays within the country. The remainder is exported to the West. The plant employs 3,000 workers.

According to the Six-Year Plan, another factory of this kind is to be established in Warsaw.

- g. Stocznia Polnocna (Northern Shipyard) in Gdansk (previously Danziger Waggonfabrik)

Besides ships, this shipyard builds special cars for the W-Z east-west line within the urban railway district of Warsaw. This enterprise employs 2,000 workers.

According to the Six-Year Plan, two large plants for the railway industry are to be erected in the area between Warsaw and Krakow east of Wisla.

Besides manufacturing, repair work is carried out at all of the above plants except in Poznan and Wytownia Sygnałow. Repair work is performed also at the former shipyard in Elblag, at "Huta Andrzej" in Opole, at the shops in Pruszkow, Rzeszow, Bydgoszcz, Ostrawa, and Karsznice, at Lodz and at Starogrod.

Finally, there are a number of smaller factories for the production of rolling stock. The largest of these, located in Zielona Gora, produces about 200 freight cars a month. In "Huta Kosciuszko" (formerly "Konigshütte") and "Huta Batory" (formerly Bismarckshütte) locomotives and cars are produced. Finally, there is a foundry in Nowa Sol.

Railway tracks are produced at the following plants: "Huta Bankowa" in Dabrowa Gornicza near Katowice, "Huta Kosciuszko" and "Huta Pokoj" in Nowy Sytom.

2. Imports

Practically speaking, no information is available concerning Poland's import of railway equipment. It is known that a great deal of the equipment for the electrification of the network comes from Hungary. Furthermore, in 1949 Poland ordered 100 locomotives from the US, but it is not known whether these have been delivered.

Poland has imported railway cars (express train cars) of the same type as the Skandiapilen from Sweden. These are produced at Kockum's machine shops in Malmö and at the railway shops in Linköping.

- 22 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-TF. Personnel

A picture of the development of the Polish railway system can be obtained from Table 19 below, which gives the total employment figures for the Polish state railways. The figures include, besides the actual railway employees, presumably the guard crews and the crews employed in reconstruction. Even with this taken into consideration a general rise is still discernible.

Table 19. Personnel in the Polish State Railways
(in thousands)

	<u>1937</u>	<u>1945</u>	<u>1946</u>	<u>1947</u>
Personnel on standard- and broad-gauge lines	180.3	295	336	340.7
Personnel on narrow-gauge lines	3.5	4.9	5.9	6.5
Total	183.8	299.9	341.9	351.2

Source: Statistical Yearbook of Poland, 1948.

As of 31 October 1948, the transportation trade unions included 103,000 workers from the transport industry and 381,000 from the railways.

G. Fuel Consumption

There is extremely little information on fuel consumption, but the following table will give an indication of the quantities used:

Table 20. Coal Consumption in Freight Transport

	<u>1947</u>	<u>1948</u>	<u>1949</u>
Consumption (kilograms per 1,000 ton/kilometers)	92.6	69.8	59.0
Freight transport (million ton/kilometers)	21,360	28,500	32,600
Total consumption (1,000 tons)	1,978	1,989	1,923

Sources: Det nya Polen, No 3/1950, and Table 15.

"International Railway Statistics 1946" gives the combined coal and oil consumption of the Polish railroads in 1946 as 5,305,000 tons and of electricity as 1,393,000 kilowatt-hours.

H. Financing and Rates

In 1946 and 1947 the railways had a deficit and had to have a state subsidy to keep in operation. As a result, rates were raised on 1 January 1948 for freight and passenger traffic. The increases, varying from 14 percent to 60 percent, had already been considerably higher than before World

S-E-C-R-E-T

S-E-C-R-E-T

War II (24 times as high as in 1948 for passenger traffic and 13 times for freight. In this connection, increases in wages and prices must be taken into consideration. The wages paid in the railway industry are 20 times higher than before World War II.

The proportional relationship between income from passenger traffic and freight traffic was, before World War II, 1:2; but in 1946 it was 1:1 and in 1947 1:0.73. Thus, there was a substantial increase in income from passenger trade, since there was also an absolute increase in freight income.

III. ORGANIZATION AND MANAGEMENT

The Polish railways are under the Ministry of Communications in Warsaw, the chief of which for several years has been the engineer Roman Rabanowski. The vice-minister is Strzelecki. The Soviet general, Rumyantsev, functions as deputy and represents Soviet interests. He has a staff of 40-50 persons.

Included under the ministry are the railways, river traffic, bus traffic, and civil air transport.

All in all, the organization of the Polish railways today can be regarded as similar to that before World War II.

Certain changes can be detected, however, such as the existence of six railroad districts (Okregi Kolejowe), with Soviet officers as chiefs and staffs consisting for the most part of Soviet citizens.

These railroad districts are sandwiched in between the ministry level and the ten railroad directorates (Dyrekcja Kolejowe), partly for military and partly for transportation reasons, since it is one of their tasks to look after Soviet military transportation.

Attached to each railroad directorate is a military transportation section (Wydział Transportu Wojskowych), which is directly subordinate to a railroad directorate. It has been confirmed that Soviet officers dressed in Polish uniforms serve in these sections.

In the fall of 1949 a Directorate General for State Railways (Dyrekcja Generalna Kolei Państwowych) was established under the Ministry of Communications. The Directorate General consists of a director general and three directors and is directly under the minister, Rabanowski. The Director General is General Rumyantsev. He has a Polish deputy.

In connection with the latest reorganization of the Polish railroads, several new divisions and sections have been set up. Some of these, located in various parts of the country, are intended for research work and scientific investigations. The following are examples:

A scientific office is located at the locomotive shops in Karsznice near Lodz. It is under the supervision of engineer Alfred Fraszczak. The office is experimenting with new methods for softening water for locomotives.

A research section in Krakow under the supervision of Professor Czaczo, is seeking practical methods for using coal of the lowest grade for fuel.

S-E-C-R-E-T

50X1-HUM

A "central construction office" in Poznan under the supervision of engineer Wyslouch deals with all matters concerning inventions and proposals for railway construction.

IV. THE SIX-YEAR PLAN

Minister of Communications Rabanowski in November 1949 spoke of the Six-Year Plan as follows:

"The main task of the railways in the course of the period is nearly to double the transport of freight and to provide better main lines between Slask and the Polish ports. In addition, there is the task of a more cultural nature, that of creating closer contact between the regions that are backward in a transportation sense and the rest of Poland."

He said further that 370 kilometers of new single-track and 750 kilometers of new double-track lines were to be laid. About 650 kilometers of single-track lines were to be expanded to double track and a little less than 1,500 kilometers of dismantled or demolished lines were to be placed in working condition. In all, 11 kilometers of railway bridges were to be erected. Nine rail junctions, among them Szczecin, Warsaw, and Gorny Slask, will be modernized. Warsaw's electric rail system will be expanded with lines to Modlin, Blonie and Wolomin. Likewise the lines Warsaw-Czestochowa-Katowice and the side line Koluszki-Lodz, together with the line Pruszcz-Wejherowo in the Gdynia/Gdansk district, are to be electrified.

The above figures for the Six-Year Plan were later revised. According to the new figures, only 701 kilometers of new rail lines are to be constructed and 541 kilometers are to be electrified. Only 1,037 kilometers of track are to be restored. The rest of the quoted plan concerning electrification still holds, with the addition, however, that the junctions Gdynia/Gdansk, Nowa Ruda, and, partially, Katowice are included in the electrification plans.

Train speeds are to be increased by 23 percent in comparison with 1949 and the number of sleeping cars and dining cars is to be augmented. The number of locomotives is to be increased by 9 percent, freight cars by 21 percent, and passenger cars by 5 percent.

The annual domestic production of rolling stock is to be increased to 315 locomotives, 18,800 freight cars, and 630 passenger cars by 1955.

Minister Rabanowski reported in addition that the state's investments in the railways during the period will be greater than for any other branch of industry. While allowance is made for a general investment index of 300 for the economy as a whole, it will be 654 for the railroads alone. These investments will include, among others, the building of factories for railway equipment between Warsaw and Krakow east of the Wisla, a plant for signal and lighting equipment in Warsaw, and warehouses for agricultural products. The latter are to reduce the pressure on the transportation system during the harvest months.

By 1955, freight transportation is calculated to reach 245 million tons and passenger traffic is predicted to carry 910 million passengers.

Economies and rationalization programs are to be carried out. The established goal for coal consumption in 1955 is 56 kilograms per 1,000 gross ton-kilometers as compared with 59 kilograms in 1949. Labor efficiency, which

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

up to 1950 had been increased by 30 percent, is to be further increased by 22 percent by bringing more workers under the system of competitive output. Up to now, 70 percent of the workers have been included under this competitive system. Finally, more railway personnel will be hired.

The revision of the Six-Year Plan has possibly entailed changes in certain other of the above points, but as yet no information has officially been made public.

V. POLISH-CZECHOSLOVAK COOPERATION

Railway transport and transit agreements reached at the Polish-Czechoslovak convention of 4 July 1947 concerning mutual cooperation in the economic field, are as follows (a more detailed discussion of the entire scope of the Polish-Czechoslovak collaboration in the traffic field can be found in Polish Harbors and Navigation, No 1, November 1950):

"The communications agreement [to be entered into under the above convention] assumes that both countries, in questions regarding communications, will adhere to the international conventions (for example, the international convention of 1933 regarding conveyance of passengers and baggage and the statutes of 1921 regarding free transit). Communications disputes which affect these two countries only will be dealt with by direct negotiation.

"To increase the mutual transit traffic, common rates will be established and both countries will make an effort to put into effect as soon as possible the agreements on common rates for railway transportation.

"The agreement prohibits, mutually, any discrimination between citizens of the two countries.

"Transit goods passing through one of the countries will have the benefit of the other country's lower rates. This regulation concerns, in particular, freight transports in larger quantities which are unloaded in the ports or are destined for further transport by sea. On the other hand, the mutual rate reductions do not include the lower rates which prevail in each country for transportation of workers, military personnel, or official consignments, for the requirements of the communications system, or for charity purposes.

"The communications agreement will establish those principles which are to be followed in calculating common rates.

"The traffic authorities in both countries are obligated mutually to guarantee each other the best possible connections with each other's transportation facilities, in direct traffic as well as transit transport. They are to make efforts to reduce formalities and to guarantee the expeditious and normal transportation of goods as well as passengers. Transportation facilities employed to these ends are to be utilized in the manner most favorable to the economies of both countries. Railway connections shall be laid through the most favorable boundary-crossing locations so that transit and direct traffic can proceed via the best route.

"The communications agreement obliges both countries to conclude agreements for the speediest possible expediting of transit transport by water and by land. Passenger traffic by rail or by plane is to receive equally expeditious treatment as freight transport."

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Coordination of industry, (in the present case, the manufacturing of railway equipment), so that a certain amount of division of labor occurs, is another phase of Polish-Czechoslovak collaboration in the economic field. How far this project has advanced is not known. It is known, however, that it has not made much progress.

The only known concrete instances of Polish-Czechoslovak cooperation in the field of transportation are the restoration of several tunnels in the border areas and a loan of Czechoslovak railway equipment to Poland to implement transit of Czechoslovak goods to the Soviet Union as well as to the ports of the Baltic Sea.

VI. OUTLOOK FOR THE FUTURE

Against the background of the difficult circumstances under which the restoration of the Polish railways has taken place, it must be admitted that up to now an imposing job has been accomplished. This has brought the Polish railway system up to the same internationally high level as before World War II. Today the trains run with the same frequency and efficiency which, before World War II, gave Poland an international reputation in this field. Whether this development will continue in the same way in the future is, on the other hand, a big question, since many circumstances of considerable importance are involved.

Hitherto Poland has been using largely equipment which antedates World War II, but, with the present vigorous utilization of this material, it is presumably only a question of a short time until an extensive replacement of this portion of the rolling stock will be necessary. Polish production of rolling stock has already attained considerable proportions. By virtue of this, it should be able to maintain a steady replacement of discarded equipment. However, with the increasing Soviet infiltration of Polish industry and the consequent loss of a large part of the aggregate production, and therefore also of the rolling stock, it is a question whether the replacement of old stock by new can be carried on to the extent which the needs require.

The Six-Year Plan states that the number of freight cars is to be increased by 20 percent while the quantity of goods to be transported is to be doubled. The corresponding figures for passenger traffic are 5 percent and more than doubling of the traffic. In reference to the above-mentioned replacement of rolling stock and the previously cited freight transport problem in the harvest months, it cannot be anticipated that the planned volumes of transportation can be carried out, since exploitation of present facilities is very heavy and since there are limits to what economies can be achieved through rationalization.

LIST OF SOURCES

The following are some of the sources used in compiling this report:

1. Official Documents and Publications

a. Polish

Statistical Yearbook of Poland, 1948 .
Wiadomosci Statystyczne, 1949 and 1950

- 27 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Maly Atlas Polski (published by Polish Geographic Society, etc.)
 Rehabilitation of Polish Economy 1948 (published by Polish Embassy in the US.)
 Polish Facts and Figures, 22 October and 19 November 1949
 Det nya Polen, No 21, 22, 1949, 1, 3, 1950
 The Polish Regained Provinces (published in England by a Polish professor of economics.)
 Poland's Recovery (published by the Polish Embassy in the US.)
 Information Bulletin of the Polish Press Agency (PAP), 18 October, 9 November, and 23 November 1950

b. International Publications and Publications of Other Governments

International Railway Statistics 1946
 Transport and Communication Review, January - March 1949
 UN Statistical Yearbook 1948
 ECE Industrial and Material Committee: Report of 25 February 1950
 International Reference Service, May 1948

2. Unofficial Sources

Wirtschaftsdienst, August 1949 (Hamburg Publishing House in collaboration with the University of Kiel)
 Svensk-Polska Handelskammarens Meddelanden, 31 August 1950
 Ostdeutschland, Holzner Verlag, Hitzingen, 1950, p 137
 Ostwärts der Oder und Weisse, Wissenschaftliche Verlagsanstalt, Hannover, 1949, pp 69 and 136

NOTES ON FIGURES

Figure 1 shows which sections of the Polish railway system are single-tracked and those which are double-tracked.

Persons who have traveled on Polish railways have reported that the lines below are double track in their entirety:

Szczecin-Goleniew.

Szczecin-Starogrod-Slupsk-Gdansk-Tczew-Elblag-Kaliningrad.

Szczecin-Krzyz-Poznan-Kutno-Warsaw-Siedlce-Lukow-Brzesc, with the exception of the sections Krzyz-Wronki and Szamotuly-Rokietnica.

Kostrzyn-Pila-Bydgoszcz-Torun-Ilawa.

Frankfurt-Poznan-Torun.

Gdynia-Bydgoszcz-Torun-Kutno.

Bydgoszcz-Inowroclaw.

Poznan-Leszno-Wroclaw-Opole-Pytm-Krakow-Przemysl.

Warsaw-Radom-Krakow.

Warsaw-Koluszki-Czestochowa-Katowice-Oswiecim.

Opole-Kedzierzyn-Chalupski.

Poznan-Ostrow-Kluczbork-Lubliniec-Katowice.

Lubsko-Zagan-Legnica-Wroclaw.

- 28 -

S-E-C-R-E-T

S-E-C-R-E-T

50X1-HUM

The following lines, according to two Polish official timetables, are partly double-tracked.

	<u>No of Sections</u>	<u>Portion Double-Tracked</u>
Warsaw-Malbork		
Warsaw-Nasielsk	10 (55 km)	9 (51 km)
Nasielsk-Dzialdowo	10 (88)	8 (72)
Dzialdowo-Ilawa	11 (60)	5 (28)
Ilawa-Malbork	10 (62)	3 (16)
Gniezno-Wrzesnia near Poznan	5 (24)	2 (9)
Inowroclaw-Herby Stare	27 (255)	14 (152)
Zary-Zagan	2 (13)	1 (8)
Chojnow-Boleslawiec	4 (25)	1 (7)
Czerwinski-Zielona Gora	2 (13)	1 (7)
Rudna Gwizdanow-Scinawa	3 (19)	2 (16)
Wolow-Wroclaw	8 (40)	4 (18)
Wroclaw-Jelenia Gora	All sections are double track	
Wroclaw-Strzelin	" " " " "	"
Walbrzych-Jadlina	" " " " "	"
Kamieniec-Krosnowice	7 (29)	5 (24)
Wroclaw-Olesnica-Kluczbork	17 (97)	15 (84)
Wuchow-Lodz		
Leszno-Krotoszyn	10 (71)	7 (43)
Ostrow-Zdunska Wola	14 (93)	8 (50)
The remaining sections are all double track.		
Kedzierszyn-Nysa	13 (75)	9 (56)
Katowice-Dziedzice	10 (45)	8 (40)
Zebrzydowice-Dziedzice	5 (30)	4 (25)
Dziedzice-Trzebina	10 (47)	6 (34)
Oswiecim-Skawina	11 (48)	6 (28)
Katowice-Chalupski		
Katowice-Makosow	4 (17)	3 (14)
Niedobczyce-Rzedowina	All sections are double track	

- 29 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

	<u>No of Sections</u>	<u>Portion Double-Tracked</u>
Krakow-Skawina	6 (20)	4 (15)
Kalwaria-Sucha	5 (24)	2 (10)
Tunel-Zabkowice	11 (69)	5 (32)
Lodz-Grotniki	All sections are double track.	
Lodz-Tomaszow	11 (53)	7 (34)
Radom-Deblin	6 (57)	5 (34)
Deblin-Lublin-Chelm	21 (144)	18 (129)
Warsaw-Otwock	All sections are double track	
Warsaw-Lochow	All sections are double track	
Lukow-Deblin	The Ryki-Leopoldow section is double track	
Gliwice-Makoszowy	2 (9)	1 (5)
Przeworsk-Rozwadow	11 (75)	5 (32)
Rozwadow-Sobow	5 (24)	2 (9)

All the above railway sections are indicated on Figure 1 as double track. This is not completely correct, since exploitation of only two timetables is not sufficient to confirm with certainty whether all the sections are double track. Since those stretches about which nothing can be confirmed are, however, evenly distributed over the lines mentioned, the possibility that the whole line is double track is so great that it is considered justifiable to regard the whole stretch as double track. However, this is not absolutely certain.

As a detail in connection with Figure 1, it can be pointed out that the junction of lines east of Kolo on the track between Poznan and Kutno occurs on a grade. Traffic from the north-south line which is to go in an east-west direction must first be brought into Kolo, where east-bound cars especially must individually be turned by means of a turntable.

The essential features of Figure 3 can be regarded as holding good for freight traffic also, since the volume of freight traffic is somewhat the same as that of passenger traffic.

All border stations can be used in transporting freight to the USSR as well as to Czechoslovakia and East Germany. In passenger traffic, there is this limitation, that in traveling to the Soviet Union a passenger can cross the border only at Brzesc (Brest) regardless of what part of Poland he is coming from.

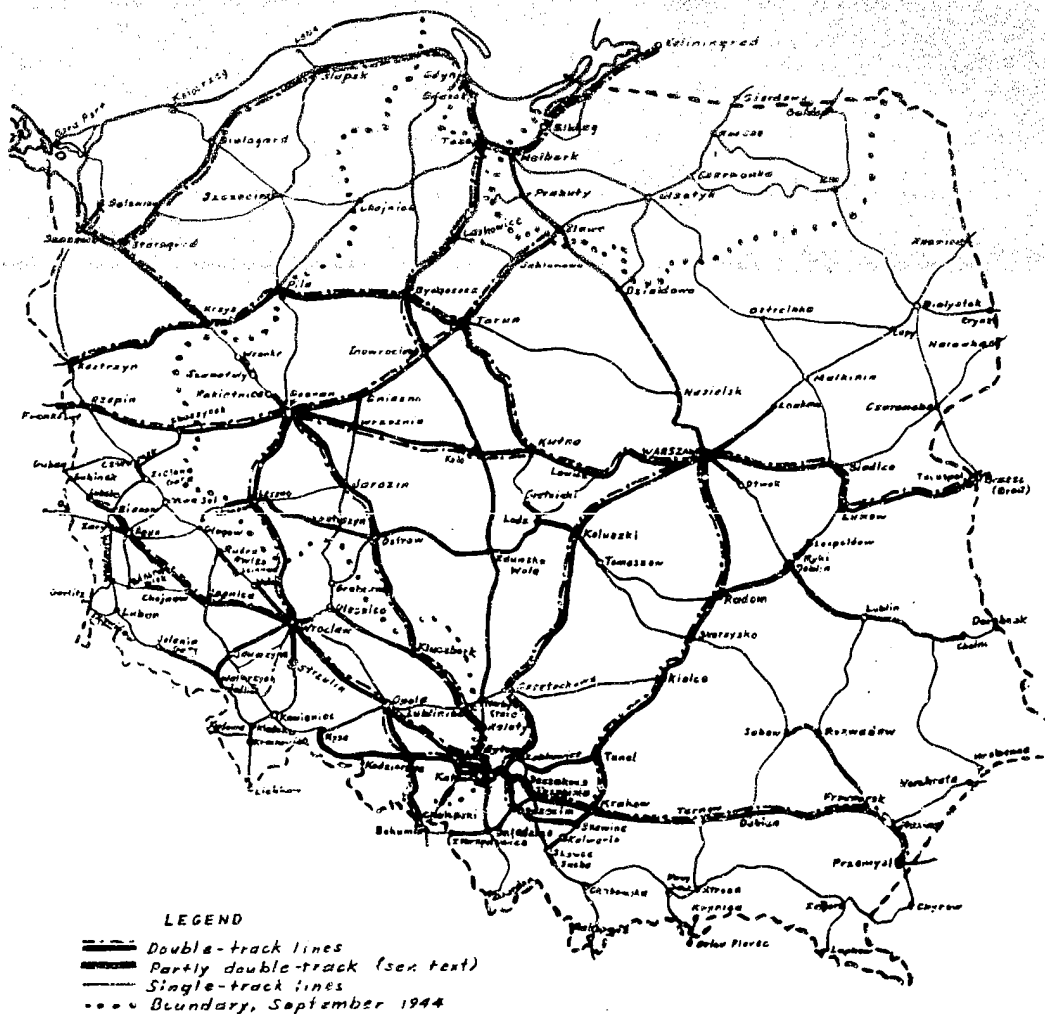
[Appended figures follow.]

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Figure 1. Polish Railway System (mid-1950)



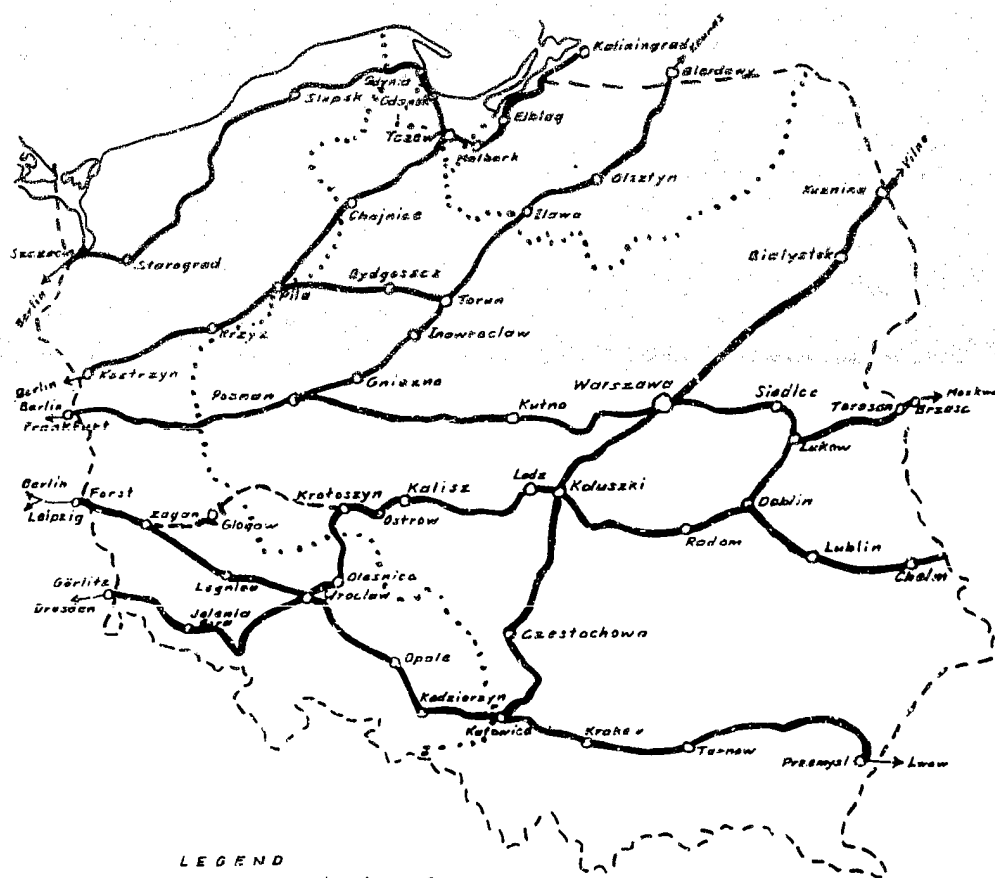
- 31 -

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

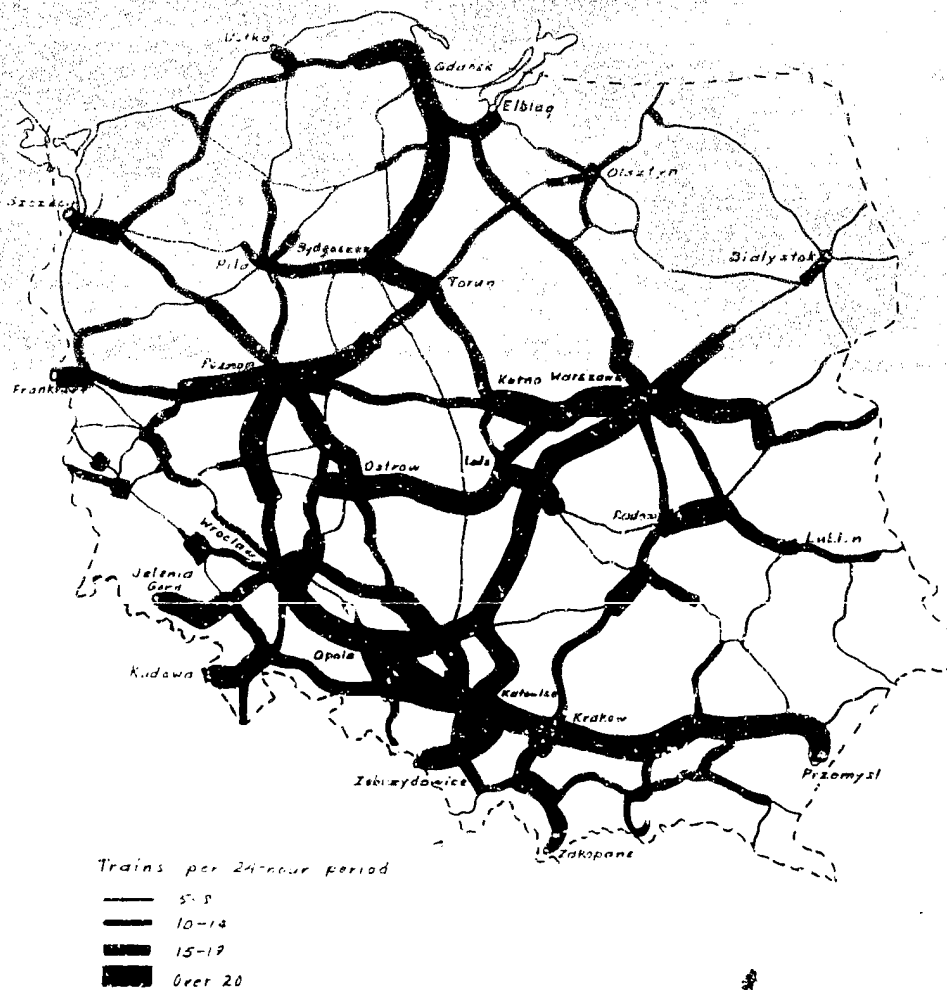
Figure 2. Transit Rail Lines in Poland

S-E-C-R-E-T

50X1-HUM

S-E-C-R-E-T

Figure 3. Frequency of Passenger Trains (summer 1949)



- E N D -

- 33 -

S-E-C-R-E-T